University of Idaho
Pedology Laboratory
Soil and Land Resources Division, College of Agricultural and Life Sciences

Soil Series:
Pedon Number: 80-ID-0547
County: Benewah
Site Information:
Elevation: 909 m
Slope: 20%
Aspect: 130°
Drainage:
Collected by: Dr. Ula Moody

Classification:
Date Described: 1980
Location: NE, NW, section 9, T. 43N., R2W
Landform: bottom of slope
Parent Material/Geology: bedrock quartzite
Vegetation: *Thuja plicata/Pachistima myrsinites*
Soil Temperature:
Soil Moisture:

FIELD DATA:

Lab No.	Horizon	Depth (cm)	Field Texture	Color		Structure	Consistence			Roots	Pores	Features	Efferv.	Boun-dary
				Dry	Moist		Dry	Moist	Wet					
1	ash	0.90											eo	
2	Bs	0-15											eo	

PHYSICAL DATA:

Lab No.	Particle Size Distribution (mm) – Sand						Silt	Clay	Textural Class	Water Content				
	VC (2.0-1.0)	C (1.0-0.5)	M (0.5-0.25)	F (0.25-0.1)	VF (0.1-0.05)	Total (2.0-0.05)	Total (0.05-0.002)	Total (<0.002)		0.1 Bar	0.33 Bar	0.67 Bar	1 Bar	15 Bar
	---------- % ----------						%	%		---------- % ----------				
1	0.0	0.0	0.08	1.61	14.36	16.03	82.70	1.27	Silt	50.7	40.6	19.7	14.1	4.5
*	0.00	0.02	0.09	1.39	16.13	17.62	78.11	4.27	Silt Loam					
2	1.16	1.03	0.70	2.41	9.96	15.23	73.83	10.95	Silt Loam	60.1	39.9	29.7	25.4	17.5
*	0.67	0.94	0.64	2.02	8.84	13.11	76.68	10.21	Silt Loam					

CHEMICAL DATA:

Lab No.	pH 1:5	pH Sat.	pH NaF	Elec Cond	Avail.[2] P	$NH_4OAc_{pH\ 7}$ Exchangeable Cations[3]				Exch. H^+	KCl-Ext. Al^{3+}	$CEC_{pH\ 7}$	ECEC[4]	Base[5] Sat.	ESP[6]	Org. C	N	C:N
						Ca^{2+}	Mg^{2+}	Na^+	K^+									
				(dS/m)	ppm	---------- $cmol_c\ kg^{-1}$ ----------								---------- % ----------				
1		6.73	8.98	0.27	4.0	0.59	0.24	0.25	0.23	2.7		1.3		33	19	0.26		
**						0.82	0.36	0.20	0.22			3.1		37	7			
2		6.08	10.20	0.30	4.4	3.89	0.95	0.18	1.00	12.5		18.6		33	1	3.65		
**						4.38	1.70	0.28	1.20			17.1		38	2			

CHEMICAL DATA (cont.):

Lab No.	Sat. Paste H_2O	Saturated Paste Extract – Soluble Ions								SAR[7]	Gypsum	$CaCO_3$	P Ret.	CBD		Pyro.		DTPA			
		Ca^{2+}	Mg^{2+}	Na^{+}	K^{+}	CO_3^{-}	HCO_3^{-}	Cl^{-}	SO_4^{2-}					Fe	Al	Fe	Al	Zn	Mn	Cu	Fe
	%	---------- $cmol_c\ kg^{-1}$ ----------									-------- % -------		%	---------- % ----------				---------- ppm ----------			
1	61	0.06	0.03	0.10	0.02	0.0	0.13	0.05	0.03									0.7	3.3	2.0	13.7
2	70	0.11	0.04	0.05	0.05	0.0	0.15	0.06	0.06									1.2	27.9	1.9	68.5

* Samples were run by the Coulter Counter method.

** CEC using the centrifuge, 80% methanol wash by Ula Moody.

1 Coarse fragments (>2mm) = (wt. coarse fragments >2mm / wt. soil + coarse fragments)*100
Note: This includes gravels, stones, & cobbles, if information is available.

2 Available phosphorus was extracted with 0.7M sodium acetate pH 4.8.

3 Extractable cations ($NH_4OAc_{pH\ 7}$) – soluble cations (saturated paste extract) = exchangeable cations Note: units are meq/100g or $cmol_c\ kg^{-1}$
If there are not any soluble cations assume extractable cations are exchangeable.

4 ECEC = Sum of cations + KCl acidity ($Al^{3+} + H^{+}$)

5 Base Sat % = (sum of NH_4OAc bases/sum of cations + $BaCl_2$-TEA acidity (pH 8.2))*100

6 ESP = exchangeable sodium percent = (Exchangeable $NH_4OAc_{pH\ 7}\ Na^{+}/CEC_{pH\ 7}$)*100

7 SAR = sodium adsorption ratio = $[Na^{+}]\ /\ (([Ca^{2+}] + [Mg^{2+}])/2)^{1/2}$ Note: conc. are in meq/L

Note: $NH_4OAc_{pH\ 7}$ = NH_4OAc at pH 7.0
$CEC_{pH\ 7}$ = CEC at pH 7.0
$CEC_{pH\ 7}$ solutions were obtained by leaching soil with 10% acidified NaCl. Solutions were analyzed by Technicon Autoanalyzer for $N\text{-}NH_4$.
Nitrogen and CEC were run on the Technicon Autoanalyzer.